**Amendments to the Claims**:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A vehicular motion control apparatus, comprising:

a steering operator that is operated by a driver;

a steering angle sensor that ~~detect~~detects a steering angle as an absolute rotational angle of the steering operator;

a detector that detects an actual vehicle state quantity; and

a controller that calculates a plurality of target vehicle state quantities on the basis of a plurality of steering angles estimated from the steering angle detected by the steering angle sensor if a reference rotational position of the steering angle sensor has not been determined, and that controls motion of a vehicle on the basis of ~~the~~a minimum ~~one of differences~~difference between the actual vehicle state quantity and the target vehicle state quantities.

2. (Original) The control apparatus according to claim 1, wherein

the vehicle state quantity is estimated on the basis of a steering angle.

3. (Original) The control apparatus according to claim 2, wherein

the vehicle state quantity is a yaw rate of the vehicle, a lateral acceleration of the vehicle, or a wheel speed difference between left and right wheels to be steered.

4. (Currently Amended) The control apparatus according to claim 1, wherein

the number of the target vehicle state quantities that are calculated is equal to the number of 360° turns of the reference rotational position of the steering angle sensor ~~by 360°~~ within a rotatable angle range of the steering operator.

5. (Currently Amended) A vehicular motion control apparatus, comprising:

a steering operator that is operated by a driver;

a steering angle sensor that detects a steering angle as an absolute rotational angle of the steering operator;

a detector that detects an actual vehicle state quantity; and

a controller that calculates a plurality of target vehicle state quantities on the basis of a plurality of steering angles estimated from the steering angle detected by the steering angle sensor, that determines a reference rotational position of the steering angle sensor on the basis of a steering angle corresponding to ~~the minimum one of differences~~a minimum difference between the actual vehicle state quantity and the target vehicle state quantities, and that then calculates a steering angle for controlling motion of a vehicle on the basis of the steering angle detected by the steering angle sensor and the determined reference rotational position.

6. (Currently Amended) The control apparatus according to claim 5, wherein

the controller calculates ~~time averages of differences~~an average of the difference between the actual vehicle state quantity and ~~the~~each target vehicle state ~~quantities~~quantity over a time period of n cycles, and determines the reference rotational position of the steering angle sensor on the basis of a steering angle corresponding to ~~the~~a minimum one of the ~~time~~ averages.

7. (Currently Amended) The control apparatus according to claim 6, wherein

the controller determines the reference rotational position of the steering angle sensor on the basis of the steering angle corresponding to the minimum one of the ~~time~~ averages if the minimum one of the ~~time~~ averages is equal to or smaller than a reference value.

8. (Currently Amended) The control apparatus according to claim 7, wherein

the controller determines the reference rotational position of the steering angle sensor on the basis of a steering angle corresponding to ~~the~~a minimum one of the

~~time~~ averages if the minimum one of the ~~time~~ averages is equal to or smaller than a reference value while a difference between ~~the~~a maximum one of the ~~time~~ averages and ~~the~~a medium one of the ~~time average~~averages is larger than a predetermined value and a difference between the medium one of the ~~time average~~averages and the minimum one of the ~~time average~~averages is larger than the predetermined value.

9. (Currently Amended) The control apparatus according to claim 5, wherein

the controller calculates ~~time averages of differences~~an average of the difference between the actual vehicle state quantity and ~~the~~each target vehicle state ~~quantities~~quantity over a time period of n cycles, calculates steering angle deviation amounts on the basis of the ~~time~~ averages ~~of the differences~~ according to an equation shown below, and determines the reference rotational position of the steering angle sensor on the basis of a steering angle corresponding to the minimum one of the steering angle deviation amounts, and

the equation is:

steering angle deviation amount = ~~time~~ average of difference between actual vehicle state quantity and target vehicle state quantity over a time period of n cycles × (NH/V)

where N, H, and V represent a ratio of a turning angle of the wheels to a total operation amount of the steering operator, a distance between the front wheels and the rear wheels, and a vehicle speed, respectively.

10. (Original) The control apparatus according to claim 5, wherein

the vehicle state quantity is estimated on the basis of a steering angle.

11. (Original) The control apparatus according to claim 10, wherein

the vehicle state quantity is a yaw rate of the vehicle, a lateral acceleration of the vehicle, or a wheel speed difference between left and right wheels to be steered.

12. (Currently Amended) The control apparatus according to claim 5, wherein

the number of the target vehicle state quantities that are calculated is equal to the number of 360° turns of the reference rotational position of the steering angle sensor ~~by 360°~~ within a rotatable angle range of the steering operator.

13. (Original) The control apparatus according to claim 5, wherein

the controller calculates a target control amount using the steering angle for controlling motion of the vehicle, and controls motion of the vehicle on the basis of the target control amount.

14. (Currently Amended) A vehicular motion control method, comprising ~~the steps of~~:

detecting a steering angle as an absolute rotational angle of a steering operator operated by a driver;

detecting an actual vehicle state quantity;

calculating a plurality of target vehicle state quantities on the basis of a plurality of steering angles estimated from the detected steering angle if a reference rotational position of the steering angle sensor has not been determined; and

controlling motion of the vehicle on the basis of ~~the~~a minimum ~~one of differences~~difference between the target vehicle state quantities and the actual vehicle state quantity.

15. (Currently Amended) A vehicular motion control method, comprising ~~the steps of~~:

detecting a steering angle as an absolute rotational angle of a steering operator operated by a driver by means of a steering angle sensor;

detecting an actual vehicle state quantity;

calculating a plurality of target vehicle state quantities on the basis of a plurality of steering angles estimated from the detected steering angle;

determining a reference rotational position of the steering angle sensor on the basis of a steering angle corresponding to ~~the~~a minimum ~~one of differences~~difference between the actual vehicle state quantity and the target vehicle state quantities; and

calculating a steering angle for controlling motion of the vehicle on the basis of the detected steering angle and the determined reference rotational position.

16. (Currently Amended) The control method according to claim 15, further comprising ~~the step of~~:

calculating ~~time~~-averages of ~~differences~~the difference between the actual vehicle state quantity and ~~the~~each target vehicle state ~~quantities~~quantity,

wherein

the reference rotational position of the steering angle sensor is determined on the basis of the steering angle corresponding to ~~the~~a minimum one of the ~~time~~-averages.

17. (New) The vehicle control method according to claim 14, wherein a target vehicle state quantity is determined for each 360° rotation of the steering operator within a rotatable angle range of the steering operator.

18. (New) The vehicle control method according to claim 15, wherein a target vehicle state quantity is determined for each 360° rotation of the steering operator within a rotatable angle range of the steering operator.